

INTERNAL VERSUS EXTERNAL CONTROL
CORRELATES AMONG COUNSELING
CENTER CLIENTS

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CHAPTER I

INTRODUCTION AND PURPOSE OF STUDY

Introduction

The purpose of this study was to investigate differences between two groups of college students in their expectancies for internal versus external control of reinforcement. One of these groups consisted of undergraduate students who applied for help at the University Counseling Center at the University of Florida; the second group consisted of undergraduate students at the same university who did not seek aid at the counseling center. Comparisons were made of the responses of the people in the two groups to an adjective check list and to a measure of expectancy for internal versus external control of reinforcement. The latter instrument, the I-E Scale, was the primary research instrument in the study, and was used to assess whether a person sees himself as being in control of his own reinforcements or whether he sees his reinforcements to be the result of luck, fate, chance, powerful others, or as beyond his control because of unpredictable forces surrounding him.

The present writer first became interested in the internal versus external control concept while searching the literature for information about the notion of client responsibility and how a client's acceptance or rejection of responsibility for having some part in what happens to him affects his behavior in a counseling relationship. The author had noticed that many of his counselees talked and behaved as if they had no control (or wanted no control) over what happened to them generally, while

many others seemed to feel that they had some control over what happened to them. Those who seemed to feel that they had no control would often say, essentially: "Here is my problem. You take it away." In contrast, the ones who seemed to feel that they had control would say: "I have a problem. Please help me work it out." When the writer came across the internal versus external control concept he noted that the characteristics of the people identified as internalizers were similar to the characteristics of those counselees who seemed to see themselves as having control over what happened to them, and that the people identified as externalizers exhibited characteristics similar to those counselees who seemed to see themselves as having no control. Because the internal versus external control concept was so similar to what the writer thought was involved in the concept of client responsibility, and because an instrument for measuring internal versus external control was available and had been used in a large number of published and unpublished research projects, the writer decided to use the internal versus external control variable to study a group of counselees in an attempt to discover and describe differences which might occur among them. For contrast, the writer decided to study, along the same dimension, a group of students who did not apply for counseling.

Internal Versus External Control

The concept of internal versus external control of reinforcement grew out of a social learning theory advanced by Julian Rotter. He suggests (Rotter, 1966) that there are basic differences in people along a

dimension of expectancy for internal versus external control of reinforcement. He calls those people who perceive reinforcements as being the result of luck or chance "externalizers" and those people who perceive events as being contingent upon their own behavior or their own relatively permanent characteristics "internalizers" (1966, p. 1).

Rotter links the concept of expectancy for internal versus external control of reinforcements to other conceptions. He notes that Veblen (1899) seemed to think that belief in luck is similar to a general belief in fate, and suggests that a belief in fate often results in passivity on the part of an individual faced with a problem. Rotter also says that the concept of alienation is similar in that the alienated individual seems unable to control his own destiny. He cites, as also related, White's (1959) concept of competence, the characteristic of all species to explore and attempt to master the environment, and notes that Seeman (1959) linked the concept of alienation as it refers to powerlessness to internal-external control. Finally he says that "Angyal (1941) has also noted the significance of the organism's motivation towards autonomy, or active mastery of the environment" (Rotter, 1966, p. 3).

The present writer feels, as he has stated above, that the concept of internal versus external control of reinforcement is similar to the concept of client responsibility. Schroeder (1960, p. 467) says that responsibility is the term used to denote "the extent to which a client holds himself answerable as an agent for" events--the extent to which he views his own attitudes and behaviors as being consequential in the course of events. This leads to the question: Does the client present himself

as "the helpless recipient of the impact of other people and of chance events," or does he claim "himself as the cause of his difficulties"?

Schroeder suggests that there are differences between clients who feel personally responsible for their actions and for outcomes and those who do not. She concludes that clients who have high responsibility scores on the measures she used in her study "if they do not flee, ask more of therapy, are willing to invest more in it, and as a result, both take more time and show more change; and that clients with low responsibility scores have a different, perhaps less self-focused goal, limit what they will invest, and therefore take less therapy time and also show less change " (*ibid.*, p. 470).

If Schroeder's study is at all reliable, and if there is even a moderate correlation between Schroeder's responsibility measures and Rotter's internal versus external control variable, one would expect to be able to find differences among college students asking for aid at a university counseling center in some of these same areas using the I-E control dimension. Even disregarding Schroeder's study, research relevant to the I-E control dimension as cited below would seem to make the I-E control variable a fruitful one with which to study students who apply for aid at a counseling center. No studies have been reported which deal specifically with a college counseling center client population using the internal-external control dimension. Therefore, not even basic information about differences among these students along this dimension has been available. The present study provides some basic data about clients at a particular college counseling center with regard to their scores on

the I-E Scale, and attempts to explore some of the implications of the findings as they bear on the question of personal responsibility and client behavior in counseling.

Review of Research

Most of the research on internal versus external control of reinforcement has been reviewed in a paper by Lefcourt (1966) and a monograph by Rotter (1966). The concept grew out of a social learning theory advanced by Rotter in 1954. In his monograph Rotter states: "In social learning theory, a reinforcement acts to strengthen an expectancy that a particular behavior or event will be followed by that reinforcement in the future" (1966, p. 2). As a child grows he will begin to note that certain events appear to be causally related to certain preceding events. He will further differentiate between events which do and do not appear to be causally related to certain of his own behaviors (produce reinforcements), and in this way build an expectancy about how effectively his own actions will bring about reinforcements.

When a reinforcement is perceived by the subject as following some action of his own but not entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, fate, as under the control of powerful others, or as unpredictable because of the great complexity of forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If a person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control (Rotter, 1966, p. 1).

It should be noted that the concept of internal versus external control of reinforcement is not concerned specifically with whether a person actually has control of his reinforcements or whether they are the result

of luck, fate, chance, powerful others, or great complex forces surrounding him, but is only concerned with whether he expects or feels that he is internally or externally controlled. In this sense the concept is phenomenologically based.

The studies to be reported below can be generally separated into: (1) those studies which test the basic notion that subjects see some tasks as controlled by fate or chance and others as controlled by skill, and that they have different expectancies for reinforcement dependent upon where they place the locus of control, and (2) those studies which investigate personality correlates of subjects who score high or low on the internal-external control continuum.

Internal versus external control as a task variable

Rotter reports a series of studies which test his basic hypothesis that: "if a person perceives a reinforcement as contingent upon his own behavior, then the occurrence of either a positive or negative reinforcement will strengthen or weaken potential for that behavior to recur in the same or similar situation," and that, "If he sees the reinforcement as being outside his own control or not contingent, that is, depending on chance, fate, powerful others, or unpredictable, then the preceding behavior is less likely to be strengthened or weakened" (*ibid.*, p. 5).

The first of these studies was by Phares (1957). Results of this study showed that reinforcements under skill conditions had greater effects on raising or lowering expectancies for future reinforcements, and that subjects make more unusual shifts in expectancies (increased expectancy after failure, decreased expectancy after success; the gambler's

fallacy) under chance conditions.

Studies by James and Rotter (1958) and by Rotter, Liverant and Crowne (1961) report greater increments or decrements following success or failure (respectively) under skill than under chance conditions. Additionally, both studies report results of trials to extinction under 100 per cent reinforced skill conditions which were unexpected and which have potentially great import for study of complex learning behavior. In these studies trials to extinction for 100 per cent reinforcement were significantly longer than for 50 per cent reinforcement under skill conditions. Under chance conditions trials to extinction under 50 per cent reinforcement were longer than for 100 per cent reinforcement, which is the usual finding. Trials to extinction for the 100 per cent reinforcement groups were significantly longer for skill than for chance instructions.

James and Rotter (1958) explain the difference in extinction rates under different reinforcement rates by suggesting that under chance conditions the change from 100 per cent (training) to 0 per cent (extinction) reinforcement clearly signals a change in situation to the subject and he extinguishes quickly. The change from 50 per cent to 0 per cent reinforcement is not so obvious a change, and it takes longer for the subject to recognize that he is no longer being reinforced. Under skill conditions, the subject tends to perceive the lack of reinforcement as due to his lack of skill rather than a change in the situation, so he continues to try to improve his performance. The subject's expectancy for internal or external control clearly comes into play here.

Rotter (1966) reported a 1961 study by Bennion which suggested that subjects were less likely to perceive tasks as chance-controlled the more the reinforcement schedule varied from 50 per cent. He also cited James' doctoral dissertation (1957) which indicated that under skill conditions subjects generalized expectancies for future reinforcement from one task to another significantly more than under chance conditions.

Phares (1962) measured perceptual thresholds tachistoscopically for shock-associated stimuli under both chance and skill conditions. He found that subjects under skill instructions (told that they could control the shock by their ability to react to certain cues) had significantly lower recognition thresholds than did subjects under chance instructions. He reasoned that, if a person feels he can control the reinforcement, he will become more able to perceive cues which will help him deal with the threatening situation than he would if he feels the situation is the result of fate, chance, or is generally beyond his control. This finding that subjects who feel they have control are more capable of dealing with threatening situations than subjects who feel they do not have control is similar to a finding in a study of fear behavior in rats by Mowrer and Viek (1948). They studied the difference in inhibition of eating behavior in two groups of rats, both of which received the same amount of electric shock, but one of which could terminate the shock by repeating a certain response, while the shock to the other group was completely controlled by the experimenter and was not related to the rats' behavior. There was no change in the eating behavior of the rats who

could control the shock, but the eating behavior of the other group was severely inhibited. The authors noted that "A painful stimulus which is not controllable tends to arouse an apprehension that it may last indefinitely or get worse, whereas objectively the same stimulus, if subject to termination at will, arouses little or no such apprehension. The apprehension experienced in the former case is appropriately termed 'fear from a sense of helplessness'" (Mowrer and Viek, 1948, p. 200).

Summary. All of the studies mentioned above support the notion that subjects have different expectancies for reinforcement, depending on whether they perceive the situations to be either skill or chance-controlled. When they see the reinforcements as largely chance-controlled, they rely less on their past experiences for predicting or expecting success or failure. They tend to make inconsistent and illogical jumps in their expectancies (gambler's fallacy), and they learn less from their experiences. In at least one instance they may experience difficulties even under skill conditions where, generally, they would tend to make better use of their past experiences and the existing cues and generalize their expectancies for future reinforcements to other tasks. This case is the one where they have had 100 per cent reinforcement under skill conditions, but where the situation has changed and they have perseverated in their inappropriate responses, feeling that their lack of reinforcement has been due to their lack of skill rather than to a change in the situation. This might lead them to self-blame for their failure to bring about reinforcement when the situation was such that they could not have realistically expected to bring about reinforcement. They might

feel responsible for controlling situations or events over which, in fact, they have no control.

Personality correlates of the internal-external control variable

Lefcourt (1966) stated that the first attempt to study internal versus external control as a personality variable was reported as part of Phares' doctoral dissertation in 1955. Phares designed a 13-item scale to measure the attribution of occurrence of reinforcement to chance or to self. In a later article (Phares, 1957) Phares reported having revised this original scale into a 26-item Likert-type scale. James further revised the scale and added filler items, using it in his 1957 doctoral dissertation research (Rotter, 1966, p. 9). Rotter stated that he, Liverant, and Seeman attempted to broaden the scale, develop subscales for such areas as achievement, affection, and general social and political attitudes, and control for social desirability by using a forced-choice format (*ibid.*). The first version of this scale had 100 items. Liverant performed an item analysis, factor analyzed the scale, and reduced it to 60 items on the basis of internal consistency criteria. Item analysis of the 60-item scale showed that the subscales were not measuring different factors and that, also, those items which were primarily achievement items tended to have a high correlation with social desirability. Items that were to have been used to measure subscale areas were therefore abandoned. Items were checked again for social desirability, and further changes were made. The final scale consists of 29 items, including six filler items, in a forced-choice format, and is called the I-E Scale. It is used to measure differences in

expectancy for internal versus external control of reinforcement, and is scored by counting the number of choices of external items. Since the items deal exclusively with the subjects' beliefs about the world, the test is considered a measure of generalized expectancy. "Such a generalized expectancy may correlate with the value the subject places on internal control but none of the items is directly addressed to the preference for internal or external control" (*ibid.*, p. 10).

Internal consistency estimates (.65-.79) were somewhat low in the studies reported, but Rotter suggested that they were due to the forced-choice format of the test. Test-retest comparisons over a one-month period were quite consistent in two different samples (correlations of .72 for a group of elementary psychology students at Ohio State University and .78 for a group of prisoners) (*ibid.*, p. 13). The degree of correlation between scores on the scale and scores on the Marlowe-Crowne Social Desirability Scale was investigated for several sample populations. Low negative correlations were found, for the most part. The median correlation between the I-E Scale and the Marlowe-Crowne Scale for five samples of college students was -.22. Correlations with group intelligence test scores have been found to be generally low, and can be considered negligible. Sex differences have been found to be minimal except in one study at the University of Connecticut which showed a significant difference between the male and female means (females scoring more toward the externalizer end of the scale) (*ibid.*, p. 14). There was no adequate explanation for this observed difference. Studies have indicated significant differences between Negroes and whites in mean I-E scores,

the Negroes scoring more toward the externalizer end of the scale (Lefcourt and Ladwig, 1965). Battle and Rotter (1963) have found evidence that there is a significant positive correlation between internality and socioeconomic class. Rotter noted that correlations of I-E Scale scores with measures of adjustment (Rotter Incomplete Sentences Blank and Taylor Manifest Anxiety Scale) have generally been difficult to interpret, frequently being curvilinear, but not U-shaped (Rotter, 1966, p. 17). He suggested that the test might discriminate between well-adjusted and maladjusted groups, in that we might generally expect a positive relationship between both extreme internality and extreme externality and maladjustment. Rotter hypothesized that more seriously maladjusted individuals would probably score more toward the externalizer end of the scale than would the normals or less seriously maladjusted individuals. He concluded that the test was not very useful for discriminating among individual college students in the middle 50 per cent of the distribution, but might be suitable for investigations of group differences.

Rotter cited three unpublished studies indicating that the I-E Scale correlated reasonably highly with three other methods of measuring externality, suggesting that the variable being measured was a stable one which could be reliably measured (1966, p. 7). He also noted that instruments for measuring internal-external control in children had been developed by Bialer (1961), by Crandall, Katkovsky, and Preston (1962), and by Battle and Rotter (1963).

Construct validity data reported by Rotter for the I-E measures (other than those already cited) included the following: Seeman and

Evans (1962) found, as hypothesized, that "internals" in a tuberculosis hospital had more information about their own conditions, questioned the hospital staff more, and were less satisfied with the lack of information they had about their conditions than "externals."

Gore and Rotter (1963) found that students in a southern Negro college who said they would actively participate in civil rights demonstrations (march or join a freedom riders' group) were significantly greater internalizers on the scale than students who either said they would not participate or who said they would only attend a rally. Strickland (1965), comparing activists in a Negro civil rights movement with those who did not take part (groups matched for education and socioeconomic status), found that activists scored significantly more toward the internal end of the I-E Scale than did the non-activists.

Phares (1965) found that students selected for being highly internal were more successful than externals at changing attitudes of others about whether or not fraternities and sororities should be maintained on campus.

James, Woodruff, and Werner (1965) replicated a study by Straits and Sechrest (1963) by finding that non-smokers were significantly greater internalizers than smokers and, additionally, found that among males those who quit smoking after the Surgeon General's report and did not start again in a specific period of time were greater internalizers than those who believed the report but kept smoking.

Though the data are not altogether clear, there appears to be a positive correlation between internality on the I-E Scale and achievement motivation. Crandall, Katkovsky and Preston (1962) found a relationship

between achievement striving and internality for boys but not for girls. In this same study no relationship was established between internality-externality and the Thematic Apperception Test achievement measure, a major test for achievement motivation. Rotter (1966, p. 22) reported a study by Efran (1963) which found that people who scored toward the internal end of the scale tended significantly to repress failures. Externals may not need to repress failures, as they already see failures to be a result of forces outside their control. However, Deever (1966, p. 21) suggested that people with high achievement motivation might "defensively adopt an external orientation as a protection against self-blame in case of failure." Seeman (1963) studied the learning and retention of parole material by prisoners divided according to their scores on the I-E dimension, and according to whether or not they had earned merits from conforming to the demands of the institution in which they were imprisoned. He found that among those inmates who were committed to being rehabilitated, internality was significantly and positively related to how well they learned rules and regulations relevant to their parole. Lefcourt (1966) suggested that in achievement striving situations, the internal-external control construct could be used for prediction if the goal to be achieved is valued by the subject.

Strickland (1962) found that subjects who were more internal were more resistive to conditioning when they were aware that they were being conditioned. Crowne and Liverant (1963) found no differences between internals and externals in a normal Asch-type situation, but found that the internals yielded significantly less than the externals when

instructed to bet on each of their judgments. Rotter (1966, p. 23) noted that Gore, in her doctoral dissertation (1962) discovered that internals tend to be resistive to subtle attempts to influence them, though when given conscious choices they are not resistive.

Summary. In terms of personality characteristics, externalizers differ from internalizers in the following ways:

High externals are more likely to behave as if all their reinforcements were determined by luck or chance--that is, they seem to feel and behave as if they had no real control over the course of events. They are likely to learn little from their experiences. They often tend to be passive and to wait for things to happen to them. They tend to be more conforming and less confident of themselves than are internalizers. They are less likely than internalizers to apply past learning to novel situations.

High internalizers, on the other hand, tend to behave in ways consistent with the behavior called for by the situations. They tend to be more capable of handling others (more successfully persuasive) and themselves (for instance, they seem more capable of stopping smoking and staying stopped). They place more emphasis on achievement, but are more likely to repress failures. (Externalizers may not repress failures as much as they tend to see their failures as beyond their control in the first place. However, they may have become external in outlook to protect themselves from self-blame.) When given conscious choices, internalizers tend to act on them, but when they perceive subtle attempts to influence them, they become resistive. They feel that they are in control whether they are, in fact, or not.

Statement of the Problem

From the discussion above it is obvious that an individual's position on the internal-external control continuum has a direct relationship to how he behaves in achievement and social situations. People who score more toward the internalizer end of the scale see themselves as responsible for their reinforcements, while people who score more toward the externalizer end of the scale see their reinforcements as being controlled by sources other than themselves. The research suggests a number of ways in which people from selected populations who score on opposite ends of the I-E Scale differ from each other in terms of learning behavior, conformity behavior, and readiness to change. No research has been reported in which the I-E control variable has been applied specifically to a college counseling center client population to see if there are any differences among the people in that group or between people in that group and undergraduate students from the same university who have not applied for counseling. This study is an attempt to investigate certain hypothesized differences between these groups as they are considered in relation to their scores on the I-E Scale.

Factors considered in this study were: (1) sex, (2) self-descriptions on an adjective check list, (3) membership in client or non-client populations, (4) type of presenting problem (educational-vocational or personal-social), (5) number of interviews, and (6) final status of case, i.e., whether case was closed by nature of the clients' failing to appear for scheduled interviews. A seventh factor, potential difficulty of each case as seen by the counselor doing the intake interview, was to be in-

vestigated, but had to be abandoned because the intake counselors did not make specific ratings on a sufficient number of cases. A separate hypothesis was not advanced regarding sex differences in I-E Scale scores because sex differences have occurred in only one previous study, and that occurrence could have resulted entirely by chance. Sex was included as a variable in one hypothesis and one question to be considered in this study in the event that it might account for some of the interaction. Thus its inclusion was intended purely as a control measure.

Hypotheses and questions

On the basis of his observations of students applying for aid at the counseling center and on the basis of the data reported in the studies using the I-E Scale, the writer entertained the following hypotheses:

Hypothesis 1.

Clients who seek help with educational-vocational problems score significantly more toward the externalizer end of the I-E Scale than do clients who seek help with social-emotional problems, but there are no significant sex differences in I-E Scale scores.

Hypothesis 2.

People who terminate counseling by failing to appear for their last scheduled appointments score significantly more externally on the I-E Scale than do those who appear for their last scheduled appointments.

Hypothesis 3.

There is a significant, positive relationship between number of client interviews and internality on the I-E Scale.

The writer was interested in discovering differences which might exist between client and non-client groups in terms of the I-E control dimension, but did not feel that he had sufficient data to hypothesize about what differences might exist. He was also interested in discovering any differences which might exist within and between the groups in terms of how the individuals in the groups would describe themselves on an instrument not yet correlated with the I-E Scale. The following questions were investigated in an attempt to provide the desired information:

Question 1.

Are there significant differences in I-E Scale scores between clients and non-clients and between males and females, and do the scores vary by sex according to client or non-client group?

Question 2.

In each group (client and non-client) is there a significant relationship between scores on the I-E Scale and number of adjectives, number of positive adjectives, and number of negative adjectives checked on the adjective check list?

The statistical treatment and findings regarding each of these hypotheses and questions will be described in Chapter III of this paper.

CHAPTER II

METHOD AND PROCEDURE

Subjects

Client group

The client group consisted of 59 undergraduate students who applied for aid at the University of Florida Counseling Center during the winter trimester, 1966-1967. The mean age for the group was 19.5 years, and the age range was from 17 to 28. Six people were 23 or older. There were 37 males and 22 females. The subjects in this group consisted of those clients who were asked to participate in this study by counselors conducting routine intake interviews. It was explained to each student before he agreed to participate in the study that his participation or non-participation would in no way affect his being seen in counseling. About one-fourth of the students who applied for aid during this period were asked to participate in the study and, of this group, only two refused.

Non-client group

The non-client group consisted of 75 undergraduates drawn from a basic logic course which was required of all students before they entered an upper division college, and from introductory psychology classes. The non-client sample was drawn from these two groups because the writer felt that it would then be more representative of the whole student population than if it were drawn from either group alone. An F-ratio was computed, however, to see if there were statistical justification for combining the

groups to form a single non-client group. The obtained F-ratio of 1.009 was not significant at the .05 level of confidence, and the writer concluded that he had no reason to suspect that the two groups were representative of any other than the same or similar populations.

The non-client group consisted of 36 males and 37 females ranging in age from 18 to 28 years, with a mean age of 19.9 years. Five of the group were 24 or older.

Instruments

I-E Scale

The primary research instrument used in this study was the I-E Scale, discussed in detail in Chapter I. A copy of the scale and directions for administering it appear in the Appendix. It is a paper-pencil test used to assess internal-external control for each of the subjects on the basis of his responses to 29 pairs of statements, six pairs of which are used as filler items. It is scored in the direction of externality.

Adjective check-list

An additional research instrument used for the study was a 35-item adjective check list which is a part of a personal information sheet filled out by all prospective clients at the University Counseling Center. It was used in an attempt to secure descriptive data independent of the I-E Scale, but whose relationship to the I-E Scale data could be investigated. In this study the check list was used in its original form by the client group but was reproduced on a separate sheet for use by the non-client group.

In addition to being asked to circle the adjectives descriptive of them, the subjects in the non-client group were required to mark each adjective on the list as positive or negative. The purpose of this step was to ascertain the consensus about the positive or negative valence of each adjective so that correlations between I-E Scale scores and number of adjectives, number of positive adjectives, and number of negative adjectives could be computed for the group.

Because the individuals in the client group responded to the adjective check list as a part of the personal data sheet they completed when they applied for counseling, and because no provision could readily or conveniently be made for their making the same assessment of the valences of the adjectives, the author decided to use the consensus of the non-client group as the criterion for determining for both groups whether any one adjective was positive or negative. On the individual level, if a person circled an adjective which was labeled as positive on the basis of group consensus, the adjective was considered positive even if the individual himself saw it as negative.

The author arbitrarily decided in advance of administering the check list that he would consider an adjective as positive or negative for purposes of this study if it were rated as such by at least 70 per cent of those subjects rating it. Table 1 shows the results of the tabulations of the ratings and the determination of the valences for each adjective in the check list.

Examination of the table indicates that, of the 35 adjectives, only three were so close to the 70 per cent determination point as

TABLE 1

Determination of Positive or Negative Valence of Adjectives
in Terms of Number of Positive Ratings Per Adjective
by Non-Client Group Members

| Adjective | Frequency of Positive Rating | % of Positive Rating | Valence |
|----------------|---------------------------------|-------------------------|---------|
| 1. Good | 75 | 100.00 | + |
| 2. Attractive | 75 | 100.00 | + |
| 3. Unclean | 1 | 1.33 | - |
| 4. Mannerly | 75 | 100.00 | + |
| 5. Intelligent | 75 | 100.00 | + |
| 6. Studious | 74 | 98.70 | + |
| 7. Crude | 1 | 1.33 | - |
| 8. Unpleasant | 0 | 0.00 | - |
| 9. Happy | 75 | 100.00 | + |
| 10. Relaxed | 72 | 96.00 | + |
| 11. Tense | 7 | 9.30 | - |
| 12. Lazy | 2 | 2.67 | - |
| 13. Depressed | 0 | 0.00 | - |
| 14. Dumb | 3 | 4.00 | - |
| 15. Slow | 9 | 12.00 | - |
| 16. Lonely | 2 | 2.67 | - |
| 17. Isolated | 3 | 4.00 | - |
| 18. Neat | 74 | 98.70 | + |
| 19. Gregarious | 66 | 88.00 | + |
| 20. Sinful | 5 | 6.66 | - |

TABLE 1 (Continued)

| Adjective | Frequency of Positive Rating | % of Positive Rating | Valence |
|--------------------|---------------------------------|-------------------------|---------|
| 21. Good-natured | 75 | 100.00 | + |
| 22. Confident | 72 | 96.00 | + |
| 23. Rebellious | 24 | 32.00 | - |
| 24. Sloppy | 0 | 0.00 | - |
| 25. Shrewd | 53 | 70.66 | + |
| 26. Gloomy | 0 | 0.00 | - |
| 27. Dishonest | 2 | 2.67 | - |
| 28. Successful | 75 | 100.00 | + |
| 29. Ambitious | 73 | 97.30 | + |
| 30. Non-conforming | 54 | 72.00 | + |
| 31. Cheerful | 73 | 97.30 | + |
| 32. Clever | 73 | 97.30 | + |
| 33. Good Looking | 73 | 97.30 | + |
| 34. Crabby | 1 | 1.33 | - |
| 35. Honest | 74 | 98.70 | + |

to present a question as to their meeting the criterion for selection. Both "shrewd" and "non-conforming" had percentages above the minimum, but were within only two percentage points of 70. "Rebellious" was the only adjective that did not meet the criterion as specified, but with 68 per cent of the responders seeing it as negative the author felt that it was close enough to the criterion to be declared negative for purposes of the study. It must be concluded from the data in the table that there was high agreement among the respondents as to the valences of the adjectives considered.

Procedure

Each student who applied for counseling at the counseling center was required to fill out a personal information sheet, a part of which consisted of the adjective check list mentioned above. On this personal information sheet each student was also asked to check one or more of three statements indicating that he saw the problems with which he sought aid to be educational, vocational, personal-social, or a combination of any or all of the three. If the student checked the personal-social statement alone or in combination with either or both of the other two statements, his problem was classified as personal-social for the purposes of this study. Otherwise, his problem was classified as educational-vocational.

Next, each student was seen by a counselor for an intake interview of about 20 minutes. The client was asked if he would participate in this experiment. He was told that his participation or non-participation would in no way affect his being seen in counseling. Among those students

asked, only two declined to participate. After he had decided he would participate, each client was asked to respond to the I-E Scale. In all cases, this testing was done after the intake interview but before the first counseling interview. The results of the testing were disclosed to neither the client nor his counselor.

The author waited until the clients terminated counseling by mutual agreement between client and counselor or by the client's failure to keep a last scheduled appointment, and then tabulated the number of appointments each client had kept, including the intake interview. These figures were obtained from the control cards kept on each client at the counseling center.

Data were gathered from the non-client group in five group testing sessions and several individual testing sessions. All testing of the group from the psychology classes was done in four one-hour evening sessions, during which the I-E Scale and the adjective check list were administered to the students who volunteered to participate in the experiment to fill course requirements in psychology. The testing of the group from the logic classes was done with the same instruments during the regular class period in lieu of the regular class presentation, except in the case of several students who came individually to the counseling center for the sole purpose of participating in the study after they were told by their instructor that they might be granted extra credit by doing so.

CHAPTER III

ANALYSIS AND INTERPRETATION OF DATA

In the first part of this chapter each hypothesis and question will be stated, and the statistical analysis of data for each will be presented with only minimum comment. The second part of the chapter will be concerned with the interpretation of the obtained data.

Statistical Analysis

Hypothesis 1

Clients who seek help with educational-vocational problems score significantly more toward the externalizer end of the I-E Scale than do clients who seek help with social-emotional problems, but there are no significant sex differences in I-E Scale scores.

This hypothesis was investigated, as planned, by use of analysis of variance. Because the ratio of males to females was unequal in the educational-vocational (E-V) problem group and the personal-social (P-S) problem group, an analysis of variance design which adjusts for disproportionality in a double classification was used (Wert et al., 1954, pp. 211-215). In this formula a correction term is computed, the effect of which is to adjust the mean squares used in the analysis of variance to remove the effects of disproportionality.

The formula for the correction term is:

$$\frac{(ad-bc)^2}{k_1 k_2 k_3 k_4} \left[(k_1)(k_2)(D_{1,2})^2 + (k_3)(k_4)(D_{3,4})^2 \right] - 2(D_{1,2})(D_{3,4})(ad-bc)$$

$$N \left[1 - \frac{(ad-bc)^2}{k_1 k_2 k_3 k_4} \right]$$

Table 2 illustrates how the values a , b , c , d , k_1 , k_2 , k_3 , and k_4 are ascertained.

TABLE 2

Symbolic Designation of Cell Frequencies on a Four-cell Table

| Stub Items | Headings | | Total |
|------------|----------|-------|-------|
| | a | b | k_1 |
| | c | d | k_2 |
| Total | k_3 | k_4 | N |

Additionally, \bar{X}_1 is the mean of k_1 , \bar{X}_2 is the mean of k_2 , and so forth. The difference between \bar{X}_1 and \bar{X}_2 equals $D_{1,2}$, and the difference between \bar{X}_3 and \bar{X}_4 equals $D_{3,4}$.

If positive, the adjustment term is added to the sums of squares for each of the two main effects and subtracted from the sum of squares for interaction, all of which are computed in the conventional manner. If negative, the adjustment term is subtracted from the sums of squares for each of the two main effects and added to the sum of squares for interaction.

The computation of the correction term is shown in the two following tables and supplementary calculations.

TABLE 3
Sums of I-E Scale Scores

| Nature of Problem | Male | | Female | | Total | |
|-------------------|------|------------|--------|------------|-------|------------|
| | k | ΣX | k | ΣX | k | ΣX |
| E-V | 23 | 235 | 11 | 108 | 34 | 343 |
| P-S | 14 | 124 | 11 | 113 | 25 | 237 |
| Total | 37 | 359 | 22 | 221 | 59 | 580 |

$$\Sigma X^2 = 6548$$

TABLE 4
Means of I-E Scale Scores

| Nature of Problem | Male | | Female | | Total | |
|-------------------|------|-----------|--------|-----------|-------|-----------|
| | k | \bar{X} | k | \bar{X} | k | \bar{X} |
| E-V | 23 | 10.22 | 11 | 9.82 | 34 | 10.09 |
| P-S | 14 | 8.86 | 11 | 10.27 | 25 | 9.48 |
| Total | 37 | 9.70 | 22 | 10.05 | 59 | 9.83 |

$$k_1 = 34, k_2 = 25, k_3 = 37, k_4 = 22, N = 59$$

$$\bar{X}_1 = 10.09, \bar{X}_2 = 9.48, \bar{X}_3 = 9.70, \bar{X}_4 = 10.05$$

$$D_{1,2} = 10.09 - 9.48 = .61, D_{3,4} = 9.70 - 10.05 = -.35$$

Correction term equals

$$\frac{[(23)(11) - (11)(14)]^2}{(34)(25)(38)(22)} \left[(34)(25)(.61)^2 + (37)(22)(-.35)^2 \right] - 2(61)(-.35)(99)$$

$$= .83$$

The sums of squares for the analysis of variance were computed in the usual way and the correction term, being positive, was added to the sums of squares for the two main effects and subtracted from the sum of squares for interaction. Table 5 shows the completed analysis of variance corrected for disproportionality.

TABLE 5
Analysis of Variance of I-E Scale Scores with Means
Adjusted for Disproportionality

| Source of Variation | Degrees of Freedom | Sum of Squares | | Mean Square |
|---------------------|--------------------|----------------|----------|-------------|
| | | Unadjusted | Adjusted | |
| Sex | 1 | 1.63 | 2.46 | 2.46 |
| Nature of Problem | 1 | 5.33 | 6.16 | 6.16 |
| Interaction | 1 | 18.87 | 18.04 | 18.04 |
| Within | 55 | 839.35 | | 15.26 |
| Total | 58 | 865.18 | | |

For Sex: $F_{1,55} = \frac{2.46}{15.26} = .16$

For Problem: $F_{1,55} = \frac{6.16}{15.26} = .40$

For Interaction:
$$F_{1,55} = \frac{18.04}{15.26} = 1.18$$

An F-ratio of 4.02 was required for significance at the .05 level with 1 and 55 degrees of freedom. The obtained F's were not significant at the .05 level.

The first part of the hypothesis, that clients who seek help with educational-vocational problems score significantly more toward the externalizer end of the scale than clients who seek help with social-emotional problems, was not upheld. The second part of the hypothesis, that there are no significant sex differences in I-E Scale scores was upheld. The obtained F-ratios show that there was no statistical support for the notion that the groups were from other than the same or similar populations or that the variance could have been attributed to factors other than chance.

Hypothesis 2

People who terminate counseling by failing to appear for their last scheduled appointments score significantly more externally on the I-E Scale than do those who appear for their last scheduled appointments.

As the subjects in this part of the study form two distinct groups of unequal numbers of subjects, being compared in terms of their scores on the I-E Scale, a t test of difference between means when the means are uncorrelated was used, as planned, to test the hypothesis (Guilford, 1965, p. 183). Because the scale is scored in the direction of externality, the hypothesis would be upheld if it could be shown that the mean of the "no show" group were significantly higher than the mean of the "show" group.

The "show" group, consisting of 38 people, had a mean of 10.26 and a standard deviation of .3.98.

The "no show" group, consisting of 21 people, had a mean of 9.05 and a standard deviation of 3.23.

Because the mean of the "show" group was higher than the mean of the "no show" group, it was obvious without computing the t test that the hypothesis could not be supported. However, the test was computed to determine whether any significant relationship existed between the obtained means.

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{X_1^2 + X_2^2}{N_1 + N_2 - 2}\right) \left(\frac{N_1 + N_2}{N_1 N_2}\right)}} = \frac{10.26 - 9.05}{\sqrt{\left(\frac{4620 + 1928}{59 - 2}\right) \left(\frac{59}{798}\right)}} = .43$$

The obtained t was not significant at the .05 level.

Hypothesis 3

There is a significant, positive relationship between number of client interviews and internality on the I-E Scale.

A Pearson product-moment coefficient of correlation was used to test this hypothesis. Because a machine calculator was available for use by the writer, a formula for the computation of r_{XY}^2 from raw data was used (Guilford, 1965, p. 98). The square root was extracted to obtain r_{XY} . Because the I-E Scale is scored in the direction of externality, a significant negative correlation is necessary to accept the hypothesis as it is stated. Only those clients who wanted help with personal-social problems were included in this portion of the study. Since many of the

clients asking for help with educational-vocational problems were seen in vocational counseling groups, but not individually, their inclusion would have had an artificial leveling effect on the data. The intake interview was included in determining the total number of interviews per client. The mean score for the I-E Scale data was 9.48. The mean number of interviews was 3.52, with the range from one to nine.

The writer constructed and inspected a scatter diagram of the raw data, and found no reason to suspect anything but linearity of the obtained data.

$$\begin{aligned}
 r_{XY}^2 &= \frac{[N \sum XY - (\sum X)(\sum Y)]^2}{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]} \\
 &= \frac{[(25)(788) - (237)(88)]^2}{[(25)(269) - (237)^2][(25)(534) - (88)^2]} \\
 &= .0179 \\
 r_{XY} &= +.13
 \end{aligned}$$

The obtained r was not significant at the .05 level with 23 degrees of freedom, as .396 was required for significance at that level. The hypothesis could not be supported.

Question 1

Are there significant differences in I-E Scale scores between clients and non-clients and between males and females, and do the scores vary by sex according to client or non-client group?

As with Hypothesis 1, above, this question was investigated by means of analysis of variance adjusted for disproportionality.

TABLE 6
Sums of I-E Scale Scores

| Group. | Male | | Female | | Total | |
|------------|------|------------|--------|------------|-------|------------|
| | k | ΣX | k | ΣX | k | ΣX |
| Client | 37 | 359 | 22 | 221 | 59 | 580 |
| Non-client | 38 | 309 | 37 | 395 | 75 | 704 |
| Total | 75 | 668 | 59 | 616 | 134 | 1284 |

$$\chi^2 = 14244$$

TABLE 7
Means of I-E Scale Scores

| Group | Male | | Female | | Total | |
|------------|------|-----------|--------|-----------|-------|-----------|
| | k | \bar{X} | k | \bar{X} | k | \bar{X} |
| Client | 37 | 9.70 | 22 | 10.05 | 59 | 9.83 |
| Non-client | 38 | 8.13 | 37 | 10.68 | 75 | 9.39 |
| Total | 75 | 8.91 | 59 | 10.44 | 134 | 9.58 |

$$k_1 = 59, k_2 = 75, k_3 = 75, k_4 = 59, N = 134$$

$$\bar{X}_1 = 9.83, \bar{X}_2 = 9.39, \bar{X}_3 = 8.91, \bar{X}_4 = 10.44$$

$$D_{1,2} = 9.83 - 9.34 = .44, D_{3,4} = 8.91 - 10.44 = -1.53$$

Correction term equals

$$\frac{(ad-bc)^2}{k_1 k_2 k_3 k_4} [(k_1)(k_2)(D_{1,2})^2 + (k_3)(k_4)(D_{3,4})^2] - 2(D_{1,2})(D_{3,4})(ad-bc)$$

$$N \left[1 - \frac{(ad-bc)^2}{k_1 k_2 k_3 k_4} \right]$$

$$\frac{.01451 [(59)(75)(.44)^2 + (75)(59)(-1.53)^2] - 2(.44)(-1.53)(533)}{134 (1-.01451)}$$

$$= 6.67$$

As the correction term was positive, it was added to the sums of squares for each of the main effects and subtracted from the sum of squares for interaction. The sums of squares were computed in the usual way.

TABLE 8

Analysis of Variance of I-E Scale Scores with Means Adjusted for Disproportionality

| Source of Variation | Degrees of Freedom | Sums of Squares | | Mean Square |
|---------------------|--------------------|-----------------|----------|-------------|
| | | Unadjusted | Adjusted | |
| Sex | 1 | 77.70 | 84.37 | 84.37 |
| Group | 1 | 6.50 | 13.17 | 13.17 |
| Interaction | 1 | 129.47 | 122.80 | 122.80 |
| Within | 130 | 1726.93 | | 13.28 |
| Total | 133 | 1940.60 | | |

$$\text{For Sex: } F_{1,130} = \frac{84.37}{13.28} = 6.35^*$$

$$\text{For Group: } F_{1,130} = \frac{13.17}{13.28} = .99$$

$$\text{For Interaction: } F_{1,130} = \frac{122.80}{13.28} = 9.25^{**}$$

* Significant at less than the .05 level (3.912 is required)

** Significant at less than the .01 level (6.816 is required)

The significant F-ratios justified an investigation of the cell means by use of the t test. No t's were significant between any two means in the table.

TABLE 9

Means and Standard Deviations of Client and Non-Client Groups

| Group | N | Mean | Standard Deviation |
|--------------------|----|-------|-----------------------|
| Client Males | 37 | 9.70 | 3.90 |
| Client Females | 22 | 10.04 | 3.66 |
| Total Clients | 59 | 9.83 | 3.81 |
| Non-client Males | 38 | 8.13 | 3.09 |
| Non-client Females | 37 | 10.68 | 3.93 |
| Total Non-clients | 75 | 9.39 | 3.79 |
| Total Males | 75 | 8.91 | 3.64 |
| Total Females | 59 | 10.44 | 3.80 |

The analysis of variance revealed significant differences in I-E Scale scores between the sexes, but not between the client and non-client groups. Additionally, there was a significant interaction effect, indicating that I-E Scale scores vary significantly by sex according to

group. There was a tendency for the average scores of all females to be more external than the average scores of all males. The scores of the males and females in the client group were more nearly alike than the scores of the males and females in the non-client group. The client males and females were not only more alike in their mean scores than the non-client males and females, but they were also more alike in terms of how their scores varied from the means. In the non-client group, the females had both higher mean scores and greater variability of scores than the males.

Question 2

In each group (client and non-client) is there a significant relationship between scores on the I-E Scale and number of adjectives, number of positive adjectives, and number of negative adjectives checked on the adjective check list?

The positive or negative valence of each adjective was determined by the procedure discussed in Chapter II. Each subject's adjective check list was scored for number, number of positive, and number of negative adjectives, and Pearson product-moment coefficients of correlation were computed for each combination of adjectives with I-E Scale scores.

The coefficients of correlation were computed for each set of data by means of the formula for the raw data computation for r_{XY}^2 discussed in Hypothesis 3 above.

Table 10 contains the coefficients of correlation obtained from the data.

TABLE 10

Pearson Product-moment Coefficients of Correlation Between
I-E Scale Scores and Number of Adjectives

| Adjectives | Client (N = 59) | Non-client (N = 75) | Total (N = 134) |
|-----------------|--------------------|------------------------|--------------------|
| Total Number | .18 | .0009 | .02 |
| Number Positive | .06 | (.28*) | (.18*) |
| Number Negative | .46** | .48** | .46** |

* Significant at below the .05 level

** Significant at below the .01 level

df = N - 2

() Found to be non-linear

Scatter diagrams were constructed for each of the sets of data.

In two cases, the data appeared to be non-linear. Correlation ratios were computed for these sets of data and F-ratios were used to check for non-linearity. Both sets of data in question were concerned with the relationship between number of positive adjectives and I-E Scale scores. The first group considered was the non-client group.

The standard deviation of the positive adjectives checked by the non-client group was computed by the formula for computation from raw data as it appears in Guilford (1965, p. 84). The standard deviation amounted to 3.36. The mean number of positive adjectives checked was 11.01. The correlation ratio (eta coefficient) computed by the method cited in Guilford (1965, p. 310) amounted to .53 (significant at below the .001 level). An F test of linearity was computed (Guilford, 1965, p. 314). The obtained ratio, 2.24, was significant at below the .05 level

with 14 and 59 degrees of freedom, indicating that the relationship of the data was non-linear. After further visual analysis of the scatter diagram, the author concluded that the distribution was S-shaped in a direction opposite to the relationship indicated by the obtained Pearson r of $+0.28$. There was a definite tendency for high I-E Scale scores to be related to low number of positive adjectives checked and low I-E Scale scores to be related to high number of positive adjectives checked, except that as the mean (9.39) of the obtained I-E Scale scores was approached from either direction the variability of the adjectives increased and probability of correctly predicting the number of adjectives that might be checked for any one I-E Scale score became quite low.

The second group consisted of the total of all client plus all non-client I-E Scale scores and their corresponding number of adjectives. The mean of this group of adjectives was 8.55 and the standard deviation was 4.16 . The computed eta coefficient was $.43$ (significant at below the $.001$ level), yielding an F-ratio of 3.33 , significant at below the $.001$ level of confidence with 15 and 117 degrees of freedom. These data were also non-linear in a direction opposite the obtained Pearson r of $+0.18$. The regression line appeared to be quite similar to that of the data described immediately above, being S-shaped with low I-E Scale scores related to high number of positive adjectives checked, and vice versa, and with the number of adjectives checked being less predictable the closer the I-E Scale scores fell to the mean of the I-E Scale scores.

An eta coefficient was computed for the client I-E Scale score and positive adjective data. At $.061$ it was almost identical to the obtained Pearson r of $+0.059$. The data were assumed to be linear.

Interpretation of Results

The three hypotheses were concerned with correlates of I-E Scale scores within the client sample only. None of the hypotheses was supported wholly in this investigation, and only one was partially supported.

In Hypothesis 1, no significant relationship was found between externality on the I-E Scale and the type of problem for which clients requested help. One conclusion which could be made from the data is that there are no real differences in terms of the internal-external control variable between clients who request help with educational-vocational problems and clients who request help with personal-social problems. Another possibility is that the method the author used for deciding upon the way each request for aid would be classified biased the results. In this study a case was classified as personal-social if the client checked a statement to that effect on the personal data sheet at the time he applied for counseling, and irrespective of whether or not he, additionally, checked statements indicating he might want help with educational-vocational problems. If only those cases were used where the personal-social statement alone was checked, different results might have been obtained. Not enough cases where only the personal-social statement was checked were available within the client sample to make an analysis of that type for this study.

The results of the statistical analysis have led the writer to consider a third possibility regarding the hypothesis. It seems possible that there is no real relationship between the way a client identifies his problem and the way he expects his problem to be solved. If a client assumes that the power for the solution of his problems resides in

objects or people outside his control, he is likely to seek out those people or objects so that they can tell or show him what to do. If, however, the client assumes that he is responsible for his problems and the resolution of them, he may seek out these same people or objects, but for guidance or information purposes and not for authoritarian directives. If this is true, there is no real reason to expect that people can be identified in terms of expectancy for internal versus external control on the basis of the type of problem with which they seek aid, and, therefore, that portion of the hypothesis should not have been supported.

As was expected, there were no sex differences along the internal-external control variable between client males and females, and there were no sex differences along the variable according to the nature of the problem presented. As noted in Chapter I above, significant sex differences in I-E Scale scores have occurred in only one previous study.

There is little to be said about the lack of statistical support for Hypothesis 2. The obvious conclusion is that there is no difference in the internal-external control variable between those clients who appear for their last scheduled counseling appointments and those who do not. Since no distinction was made between those people who were declared to have personal-social problems and those who were presenting educational-vocational problems, this could not have been a complicating factor. The standard deviations were so similar that the groups must be considered to have non-significant differences in variability.

The third hypothesis, that there is a significant positive

relationship between internality of the I-E Scale and number of interviews was not upheld, but these results should be interpreted as non-conclusive because a number of factors which might have influenced the results were not controlled.

A major factor which might have affected the results is that the only cases studied were those cases where the problems were declared personal-social on the basis of how the client checked the statements on the personal information sheet at the time he applied for counseling. If all clients who applied for aid had been included, however, the results would have been further complicated because many of the people seeking help with educational-vocational problems were seen routinely for two one-hour meetings in special group counseling sessions, and were not seen in individual counseling sessions. The determination of whether the client should be seen and what type of counseling (group or individual) and what level of counselor experience (practicum student, intern, or senior staff) was necessary was made by the counselor doing the intake interview. Therefore, some cases were terminated at the end of the intake interview, and those which were carried beyond the intake interview were handled in different types of counseling settings (group and individual) by counselors who varied in length of experience. Because of these complicating factors, and because the sample was rather small (25 cases), the results of this portion of the study should not be considered conclusive.

The results of the analysis of data gathered to answer the two questions explored as part of this study indicate that both similarities and differences exist between the client and non-client groups.

The answer to Question 1 is that there are significant sex differences in I-E Scale scores, and that there are sex differences by group. However, there were no significant differences in I-E Scale scores between the groups, irrespective of sex. As there were no significant differences between the means of any two groups, the differences must lie primarily in the variability of the groups.

Examination of the means and standard deviations of the male client group, the female client group, the male non-client group, and the female non-client group led the author to conclude that there is greater homogeneity in scores in the client group than in the non-client group. The non-client group might be distinguished from the client group by the greater differences in variability between the males' and females' I-E scores. There were greater differences on the whole between the means and standard deviations of the males and females in each group than between those of the total client and total non-client groups. More simply stated: the individuals in the total client group scored very much like the individuals in the total non-client group, but within the individual groups the males and females were less similar in the way they scored if they were in the non-client group than if they were in the client group.

The males in the client group had greater variability in scores than did the males in the non-client group, while the females in the client group had less variability in scores than did the females in the non-client group. In both client and non-client groups the females' scores were higher than those of the males, though this trend was most clear-cut and predictable in the non-client group.

Question 2 was concerned with attempts to discover significant correlations between I-E Scale scores and number of adjectives, number of positive adjectives, and number of negative adjectives checked by subjects in each group.

There were no significant correlations between total number of adjectives and I-E Scale scores in the client group, the non-client group, or both groups combined.

Low significant positive correlations did occur between I-E Scale scores and number of positive adjectives in the non-client group and the total (client and non-client groups combined) group, but further analysis of the data indicated that the relationships were non-linear and in a negative direction. Eta coefficients computed for these data were significant at below the .001 level, indicating that the non-linear relationship was a strong one, and not likely to be due to chance. Inspection of the scatter diagrams led the author to posit an S-shaped regression line for each set of data, with high I-E Scale scores related to low numbers of positive adjectives checked and vice versa, and with predictability of number of adjectives from the I-E Scale scores becoming random as the mean of the I-E Scale scores was approached. It should be noted that the eta coefficients for these sets of data, though clearly significant, are low, and should be viewed only as indicative of the trends of the data.

A definite positive trend was noticed between I-E Scale scores and numbers of negative adjectives, indicating that the more toward the external end of the scale a subject scored, the more negative adjectives he was likely to check. This was true for the client and non-client groups,

combined or individually. However, the correlations were too low to assure accuracy in predicting anything but a tendency for high I-E Scale scores to be accompanied by a high number of negative adjectives.

Looking at the data from Question 2 as a whole, it becomes evident that, within the client group, I-E Scale scores are related only to the number of negative adjectives checked. In the non-client group and the total group, however, I-E Scale scores are positively related to number of negative adjectives checked, and they also have a negative, non-linear relationship with number of positive adjectives checked. This latter relationship appears to be best described as S-shaped, with high I-E Scale scores being accompanied by high numbers of positive adjectives, but with a random relationship existing between adjectives and I-E Scale scores as the I-E Scale scores approach their mean.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to investigate differences within and between two distinct groups of undergraduate college students along a dimension of expectancy for internal versus external control of reinforcement, and in terms of correlates of that dimension. One group consisted of 59 males and females who applied for aid at the University Counseling Center, University of Florida. The other group consisted of 75 students from beginning psychology and logic classes at the same university who volunteered to participate in this study to receive class credit. The internal versus external control correlates investigated were: (1) sex, (2) self-description on an adjective check list, (3) membership in client or non-client group, (4) type of presenting problem (educational-vocational or personal-social), (5) number of counseling interviews, and (6) cases closed by nature of the clients' failures to appear for scheduled interviews.

Internal versus external control is a concept based on a social learning theory advanced by Julian Rotter, and is concerned, essentially, with whether a person expects his reinforcements to be within his control (internal control) or whether he expects them to be the result of luck, fate, chance, or otherwise beyond his ability to influence them (external control). There are a number of studies which support Rotter's contention that a person's belief in internal or external control has relevance to how he learns and how he makes use of his learning in his behavior.

Some of the most obvious and consistent differences between people who have expectancies for internal control and people who have expectancies for external control are these:

Rotter (1966) says that people with an expectancy for external control behave as if they have no real control over the course of events, and are likely to learn little from their experiences. They often tend to be passive and to wait for things to happen to them. They tend to be more conforming and less confident than people who have an expectancy for internal control. In any situation they may behave illogically, sometimes behaving in exactly the opposite way from what would be called for by the situation, exhibiting the "gambler's fallacy."

People with expectancies for internal control tend to behave in ways consistent with the situation at hand. They tend to be better at influencing others and more capable of controlling their own behaviors than do the externalizers. They place more emphasis on achievement, but are more likely to repress failures. When they are given conscious choices, internalizers tend to act on them, but they are very resistive to subtle attempts to influence them.

Rotter (1966) has compared the internal-external control concept with a general belief in fate (Veblen, 1899), the concept of alienation, the concept of competence (White, 1959), powerlessness (Seeman, 1959), and motivation towards autonomy (Angyal, 1941). The present writer feels that the concept also relates to the notion of personal responsibility, especially as it is talked about by Schroeder (1960), who says that responsibility is the term used to denote the tendency for a client to hold

himself answerable for what happens to him. The author had hoped that the information gathered in this study would help clarify the connection between a client's concept of personal responsibility and his behavior in counseling.

Three hypotheses were advanced in this study, only one of which was supported, and that one only partially. All three hypotheses were concerned with relationships which might have existed in the client group. No significant relationships were discovered between I-E Scale scores and sex, nature of problem (educational-vocational or personal-social), number of interviews, or appearance or non-appearance by the client for the last scheduled counseling interview. The writer had expected to find that sex was not significantly related to I-E Scale scores because significant sex differences in I-E Scale scores were found in only one previous study.

Two questions were investigated, both of which were concerned with differences between the client and non-client groups. It was discovered that there were no significant differences in I-E Scale scores between the client and non-client groups without taking sex differences into consideration. When sex differences were considered, a significant relationship was found to exist. The females tended to have higher means (though not significantly so) and greater variability than the males, but the means and standard deviations of the males and females in the client group showed much more homogeneity than did the means and standard deviations of the males and females in the non-client group.

The data also were indicative of differences which existed between the client and non-client groups in numbers of positive adjectives

checked on an adjective check list. There was no significant relationship between I-E Scale scores and number of positive adjectives checked in the client group, but a definite, although non-linear relationship was found in the non-client group. In the non-client group, the higher the I-E Scale score a subject had the more likely he was to check a low number of positive adjectives. The opposite relationship held for a low I-E Scale score. However, the closer to the mean I-E Scale score the obtained score fell, the more clearly it approached a random relationship to the number of positive adjectives checked.

No significant correlations were obtained between I-E Scale scores and total numbers of adjectives checked in either the client or non-client group. Definite trends were discovered between I-E Scale scores and numbers of negative adjectives for both groups, but the correlations were so low that they could not be used for making reliable predictions from specific scores.

Conclusions

The purposes of this study were (1) to discover and describe differences which might exist among and between clients and non-clients in internal-external control and correlates thereof, and (2) to help clarify how a client's notion of responsibility is relevant to his behavior in counseling.

The first of these purposes, having been primarily concerned with description, was relatively easy to accomplish.

It can be concluded from the data that:

- (1) The main difference between the client and non-client groups was the difference in homogeneity of the groups, the client group being more homogeneous than the non-client group with regard to central tendency and variability between males and females.

The standard deviations for the client males and females, the non-client males and females, and for the total males and total females were quite similar to those Rotter (1966, p. 15) reported for nine different populations, but the means of the groups in this study were generally slightly higher. A replication of the results obtained in this study would be necessary before it would be safe to conclude that the observed difference in homogeneity of the two groups could be used to distinguish one group from the other.

- (2) In the client group, as an individual's I-E Scale score rises, he is likely to check more negative adjectives as being descriptive of himself, but he is neither more nor less likely to check more positive adjectives or more total adjectives.

In the non-client group, as an individual's I-E Scale score rises, he is more likely to check more negative adjectives and fewer positive adjectives as being descriptive of him. As his I-E Scale score falls, he is likely to check fewer negative adjectives and more positive adjectives about himself. The closer his I-E Scale score falls toward the mean of the I-E Scale scores, however, the less predictable will be the number of positive adjectives he is likely to check about himself. A change in his I-E score would not increase

the likelihood that he would check either more or fewer total adjectives as being descriptive of himself.

- (3) If a relationship exists between the I-E Scale scores and type of problem presented, number of counseling interviews attended, and appearance or non-appearance for last scheduled interviews, the relationship is not a simple one that can be shown to exist irrespective of the experience level of the counselor involved, the type of counseling treatment, and the simple two-way classification of the problem.

The second of these purposes, having been primarily evaluative, was more difficult to accomplish.

Much of this writer's thinking about the relationship of responsibility to client behavior was influenced by the lack of positive results in Hypothesis 1, where no significant differences were found between scores earned by students who were asking for help with personal-social problems and scores earned by students who were asking for help with educational-vocational problems. These results led the writer to revise his thinking about relationships which might exist between the client's perception of where the locus of responsibilities lies and what type of problem he presents, how many interviews he attends, and whether or not he appears for the last scheduled interview. It may well be that the expectations clients have about how their problems are solved--either through their efforts or by the efforts and through the power of other people or objects--have no direct relationship to the types of problems they present,

the length of time they stay in counseling, or whether or not they appear for their last scheduled appointments. The expectations may be quite relevant to how accepting they feel toward the approach used by the counselor and to the type of information they receive, and to how satisfied they are with the treatment they receive. These factors would be worthy of examination in another study.

Clients' satisfactions with the treatment they receive, and their acceptance of the counselors' approaches and of the information they receive may affect such things as how long they spend in therapy and whether they appear or do not appear for interviews. It is not likely, however, that their appearance or non-appearance or the length of time they spend in therapy could be used as an index of their degree of satisfaction or their level of acceptance of counselor approaches or of information they receive.

After reviewing the results of this study, this writer feels that more meaningful information than was obtained about how client responsibility is related to client behavior could be obtained from hypotheses directed toward assessing the degree of clients' satisfactions with their treatment, and their levels of acceptance of information and counselors' approaches. The obtained results were valuable because they made the author aware of the need to do further basic thinking about the nature of client responsibility.

APPENDIX

I-E SCALE

INSTRUCTIONS

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Your answers to the items on this inventory are to be recorded on a separate answer sheet which is loosely inserted in the booklet. REMOVE THIS ANSWER SHEET NOW. Print your name and any other information requested by the examiner on the answer sheet, then finish reading these directions. Do not open the booklet until you are told to do so.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. Find the number of the item on the answer sheet and black-in the space under the number 1 or 2 which you choose as the statement more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

Note: The letters of the external choices are underlined in this copy of the scale. They would not ordinarily be underlined in the test booklet. Those items which have neither a nor b underlined are filler items.

1. a. Children get into trouble because their parents punish them too much.
b. The trouble with most children nowadays is that their parents are too easy with them.
2. a. Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.
3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.
4. a. In the long run people get the respect they deserve in this world.
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. a. Without the right breaks one cannot be an effective leader.
b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. a. No matter how hard you try some people just don't like you.
b. People who can't get others to like them don't understand how to get along with others.
8. a. Heredity plays the major role in determining one's personality.
b. It is one's experiences in life which determine what they're like.
9. a. I have often found that what is going to happen will happen.
b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
b. Many times exam questions tend to be so unrelated to course work that studying is really useless.
11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.
12. a. The average citizen can have an influence in government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14. a. There are certain people who are just no good.
b. There is some good in everybody.
15. a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might just as well decide what to do by flipping a coin.
16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b. By taking an active part in political and social affairs the people can control world events.
18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck."
19. a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.
20. a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends upon how nice a person you are.
21. a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22. a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have much control over the things politicians do in office.
23. a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard I study and the grades I get.
24. a. A good leader expects people to decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.
26. a. People are lonely because they don't try to be friendly.
b. There's not much use in trying too hard to please people, if they like you, they like you.
27. a. There is too much emphasis on athletics in high school.
b. Team sports are an excellent way to build character.
28. a. What happens to me is my own doing
b. Sometimes I feel that I don't have enough control over the direction my life is taking.
29. a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run the people are responsible for bad government on a national as well as on a local level.

I-E SCALE

Name _____ Last _____ First _____ Middle _____ Age _____ Sex _____
 Student Number _____ Class _____ Major _____ Date _____

| | (a) | (b) |
|----|-----|-----|
| 1 | 0 | 0 |
| 2 | 0 | 0 |
| 3 | 0 | 0 |
| 4 | 0 | 0 |
| 5 | 0 | 0 |
| 6 | 0 | 0 |
| 7 | 0 | 0 |
| 8 | 0 | 0 |
| 9 | 0 | 0 |
| 10 | 0 | 0 |
| 11 | 0 | 0 |
| 12 | 0 | 0 |
| 13 | 0 | 0 |
| 14 | 0 | 0 |
| 15 | 0 | 0 |

| | (a) | (b) |
|----|-----|-----|
| 16 | 0 | 0 |
| 17 | 0 | 0 |
| 18 | 0 | 0 |
| 19 | 0 | 0 |
| 20 | 0 | 0 |
| 21 | 0 | 0 |
| 22 | 0 | 0 |
| 23 | 0 | 0 |
| 24 | 0 | 0 |
| 25 | 0 | 0 |
| 26 | 0 | 0 |
| 26 | 0 | 0 |
| 28 | 0 | 0 |
| 29 | 0 | 0 |

ADJECTIVE CHECK LIST

Name _____ Sex _____ Date _____

Age _____ Class _____ Major _____

Circle the adjectives below which you feel are descriptive of you.

- | | | | |
|----------------|---------------|------------------|--------------------|
| 1. Good | 10. Relaxed | 19. Gregarious | 28. Successful |
| 2. Attractive | 11. Tense | 20. Sinful | 29. Ambitious |
| 3. Unclean | 12. Lazy | 21. Good-natured | 30. Non-Conforming |
| 4. Mannerly | 13. Depressed | 22. Confident | 31. Cheerful |
| 5. Intelligent | 14. Dumb | 23. Rebellious | 32. Clever |
| 6. Studious | 15. Slow | 24. Sloppy | 33. Good Looking |
| 7. Crude | 16. Lonely | 25. Shrewd | 34. Crabby |
| 8. Unpleasant | 17. Isolated | 26. Gloomy | 35. Honest |
| 9. Happy | 18. Neat | 27. Dishonest | |

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BIOGRAPHICAL SKETCH

James Ira Morgan was born October 17, 1940, at Havana, Illinois. He attended the public schools in Havana, and was graduated from Havana Community High School in 1958. In 1962, he received the degree of Bachelor of Science from Bradley University. He was employed as a counselor at Bradley University from 1962 until 1964. He received the degree of Master of Arts from the same university in May, 1964. In September, 1964, he enrolled in the Graduate School of the University of Florida. He worked as a teaching assistant in the Department of Personnel Services until June, 1965. During the summer of 1965, he was employed as Training Placement Officer with Volunteers in Service to America, a branch of the United States Office of Economic Opportunity. He returned to the University of Florida in September, 1965, and was employed as a counselor intern at the University Counseling Center until July, 1967. Since July 1, 1967, he has been employed as a Counseling Psychologist at the University Counseling Center, University of Florida.

Mr. Morgan is married to the former Dorothy Weaver Blauch. He has three children, a stepdaughter, Kathy, a stepson, Mike, and a son, James, Jr. He is a member of the American Personnel and Guidance Association, Association for Counselor Education, and Supervision, American College Personnel Association, National Council on Family Relations, Phi Delta Kappa, and Kappa Delta Pi.

This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Education and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Education..

August 12, 1967

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